

Notice of Allowability

Application No.

10/810,636

Examiner

Sherry L. Estremsky

Applicant(s)

TOKURA ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed March 29, 2004.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 29 March 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Pous on August 16, 2005.

To make the abstract 150 words or less, the application has been amended as follows:

In the abstract, the last sentence, beginning in line 12, was deleted ("A command is output to reduce....").

Allowable Subject Matter

2. Claims 1-18 are allowed.

3. The following is an examiner's statement of reasons for allowance:

No reference nor combination of references was found which teaches a control apparatus for an automatic transmission including a controller which detects a predetermined timing that is after a start of a torque phase during a shift of the transmission and before the clamping force of the friction engaging element being applied increases to the point at which it alone can transmit the torque input to the transmission and which outputs commands to reduce the torque of the

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vehicle prime mover and to make the clamping force of the friction engaging element being released 0 in response to detection of the predetermined timing, as required by claim 1.

No reference nor combination of references was found which teaches a control apparatus for an automatic transmission including a detecting means for detecting a predetermined timing that is after a start of a torque phase during a shift of the transmission and before the clamping force of the friction engaging element being applied increases to the point at which it alone can transmit the torque input to the transmission, means for outputting a command to reduce the torque of the vehicle prime mover in response to detection of the predetermined timing, and means for outputting a command to make the clamping force of the friction engaging element being released 0 in response to detection of the predetermined timing, as required by claim 7.

No reference nor combination of references was found which teaches a control method for an automatic transmission including detecting a predetermined timing that is after a start of a torque phase during a shift of the transmission and before the clamping force of the friction engaging element being applied increases to the point at which it alone can transmit the torque input to the transmission and outputting commands to reduce the torque of the vehicle prime mover and to make the clamping force of the friction engaging element being released 0 in response to detection of the predetermined timing, as required by claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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U. S. Patent 5,046,383 (Butts et al.) September 1991 - discloses an automatic transmission control apparatus which detects a timing at an impending completion of a torque phase of a shift and fully releases the off-going clutch at that timing. The engine torque is not controlled in response to the detected timing.

U. S. Patent 5,207,122 (Minagawa) May 1993 - discloses an automatic transmission control apparatus which gradually reduces the clamping force of the element being released and gradually increases the clamping force of the element being applied in the torque phase of a shift. The control apparatus determines when the first derivative of the input shaft revolutionary speed reaches a feedback termination value during the torque phase of the shift and immediately releases the friction engagement element being released in response thereto.

U. S. Patent 5,304,102 (Narita et al.) April 1994 - discloses an automatic transmission control apparatus which fully releases the friction element being released during a torque phase of a shift (without gradual reduction of the clamping force), after which the element being applied develops sufficient torque to initiate a change in speed ratio.

U. S. Patent 5,865,708 (Nishio et al.) February 1999 - discloses an automatic transmission control apparatus which, during the torque phase of a shift, gradually increases the clamping force of the friction element being applied and gradually decreases the clamping force of the friction element being released, then returns the clamping force of the release element to zero upon the start of the inertia phase.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry L. Estremsky whose telephone number is (571) 272-7090. The examiner can normally be reached on Tuesday and Friday from 7:30 a.m. to 6:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SHERRY ESTREMSKY
PRIMARY EXAMINER
AU3681 8-16-05